

MEMORANDUM FOR: Spec. Asst./NPIC

A1 -

RED received a 2-hour briefing from []
[] on 19 March 70 on the same subject. []
[] attended from RED, with []
[] being the company briefers. We are
presently studying how this color technique can
be applied to NPIC ops problems. I am ready to
discuss this with [] anytime.

*P.S. I briefed [] - He will himself - No action
talk to [] required of me at this time.*

(DATE)

FORM NO. 101 REPLACES FORM 10-101
1 AUG 54 WHICH MAY BE USED.

(47)

MEMORANDUM FOR: Chief, RED

Nick:

The attached was sent to [] by []
[] would like you to read it and
then meet with him to discuss the follow-up
actions. He is thinking in terms of arranging
for [] to brief you and your people
on this proposal sometime at your convenience.
Let me know when you are ready to discuss.

31 August 1970

(DATE)

FORM NO. 101 REPLACES FORM 10-101
1 AUG 54 WHICH MAY BE USED.

(47)

11 August 1970

Dear Art:

I really believe that this technique has application
in matter of your interest and highly recommend
that you get a briefing from [redacted]

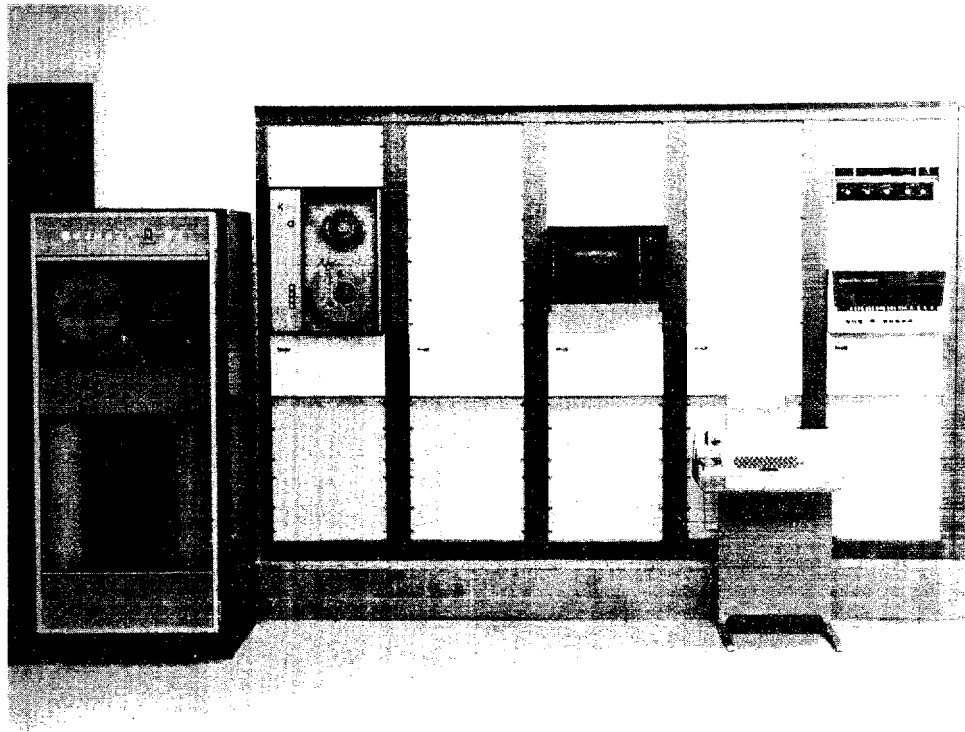
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[redacted] Washington Office,
[redacted]

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[redacted]
Vice Admiral, USN (ret.)

COLOR DISPLAY SYSTEM



Several years ago the [] recognized the need, within the scientific community, for a display system that could accurately provide more than two dimensional information to an observer. At that time, the best available display system could portray data with a high degree of resolution and accuracy in two dimensions, but lacked resolution and accuracy in the third dimension.

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The Microwave Division has developed a highly refined display technique which provides approximately 1% resolution and accuracy in two dimensions and at least 2% resolution and accuracy in the third.

The display technique uses X and Y displacement to describe two dimensions and various combinations of color hue, saturation and luminescence of the three primary colors to display the third dimension. Work to date has shown that the visual acuity of the human eye can discern, on an absolute basis, over fifty different combinations of color hue, saturation and luminescence. It also appears that fifty different color values do not represent the limit of the detection capability of the human eye. Previously, three dimensional presentations provided only changes in luminescence levels to indicate the magnitude of the third dimension. The human eye most readily resolves boundaries between luminescence changes but the eyes ability to detect absolute luminescence magnitudes is limited to about 12 different shades of gray.

The color display system may be programmed to provide as many as 1024 different combinations of color hue, saturation and luminescence to display the magnitude of the third dimension. The color display system will operate from replayed data for evaluation of different combinations of color presentations. The system is installed in where complete facilities are available for the playback of previously recorded sensor data.

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Key Features:

- ★ Presentation of three dimensional information with high resolution and accuracy
- ★ Rapid translation of large volumes of data
- ★ Convenient manipulation of all three axis information to correct, compensate, or distort the displayed values.
- ★ Real time or hard copy presentation of the displayed information
- ★ Effortless changing of colors representing various magnitudes of input data

Application:

- ★ Data analysis and reduction

For further information, contact:



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HIGH RESOLUTION PSEUDO

COLOR DISPLAY OPTIONS

High Resolution Pseudo Color Display System Model No.	Scan Conversion & Scan Capability	Color Algorithm Conversion Unit Option Model No.	Color Provisions	Thumbwheel Switches 2200 Series Only	Memory	Loading
SG-D2001	16 Data Levels	2101	Fixed Color	16 Sets	Read Only	Individual Circuit Board
		2201	Manually Var.		Thumbwheel Var.	Thumbwheel
		2301	Stored Value		Electronically Alterable	Thumbwheel Mod SG-D2500 Data Preprocessor, other Data Source
SG-D2002	32 Data Levels	2102	Fixed Color	32 Sets	Read Only	Individual Circuit Board
		2202	Manually Var.		Thumbwheel Var.	Thumbwheel
		2302	Stored Value		Electronically Alterable	Thumbwheel Mod SG-D2500 Data Preprocessor, other Data Source
SG-D2004	64 Data Levels	2104	Fixed Color	64 Sets	Read Only	Individual Circuit Board
		2204	Manually Var.		Thumbwheel Var.	Thumbwheel
		2304	Stored Value		Electronically Alterable	Thumbwheel Mod SG-D2500 Data Preprocessor, other Data Source
SG-D2008	128 Data Levels	2108	Fixed Color	128 Sets	Read Only	Individual Circuit Board
		2208	Manually Var.		Thumbwheel Var.	Thumbwheel
		2308	Stored Value		Electronically Alterable	Thumbwheel Mod SG-D2500 Data Preprocessor, other Data Source
SG-D2010	1024 Data Levels	None Required	None Required	None Required	Does not require any additional equipment to accept parallel data	
SG-D2400	Test Pattern & Color Study Generator				Applicable to all SG-D2000 Series Display Units - Provides all necessary functions for monitor setup and evaluation of given color algorithms. DOES NOT REQUIRE DATA INPUT.	